**Stored Procedures**

**A stored procedure is a segment of declarative SQL statements stored inside the database catalog. A stored procedure can be invoked by triggers, other stored procedures, and applications such as Java, Python, PHP, etc.**

**Creating a Stored Procedure**

**DELIMITER //**

**CREATE PROCEDURE `p2` ()**

**LANGUAGE SQL**

**DETERMINISTIC**

**SQL SECURITY DEFINER**

**COMMENT 'A procedure'**

**BEGIN**

**SELECT 'Hello World !';**

**END//**

**Calling a Stored Procedure**

**To call a procedure, you only need to enter the word CALL, followed by the name of the procedure, and then the parentheses, including all the parameters between them (variables or values). Parentheses are compulsory.**

**CALL stored\_procedure\_name (param1, param2, ....)**

**CALL procedure1(10 , 'string parameter' , @parameter\_var);**

**Triggers**

**A trigger is a set of actions that are run automatically when a specified change operation (SQL INSERT, UPDATE, or DELETE statement) is performed on a specified table. Triggers are useful for tasks such as enforcing business rules, validating input data, and keeping an audit trail. Following are the operations.**

AFTER INSERT

BEFORE INSERT

AFTER UPDATE

BEFORE UPDATE

AFTER DELETE

**CREATE TRIGGER trigger\_name trigger\_time trigger\_event**

**ON table\_name**

**FOR EACH ROW**

**BEGIN**

**...**

**END;**

**Index**

**A database index is a data structure that improves the speed of operations in a table. Indexes can be created using one or more columns, providing the basis for both rapid random lookups and efficient ordering of access to records.**

**While creating index, it should be considered that what are the columns which will be used to make SQL queries and create one or more indexes on those columns.**

**Types of index**

PRIMARY KEY

UNIQUE

FULLTEXT